

REMARKS/ARGUMENTS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-30 are pending in the present application. Claims 11 and 15 have been amended. Claims 1, 6, 11, 13-15, 22, and 26 are independent claims. The Examiner is respectfully requested to reconsider his rejections in view of the Amendments and the following Remarks.

Allowable Subject Matter

It is gratefully acknowledged that the Examiner has allowed claims 1-10, 13, and 14.

It is also acknowledged with appreciation that the Examiner considers the subject matter of claim 15 as being allowable if amended to overcome the objection.

Claim for Priority

It is gratefully acknowledged that the Examiner has recognized Applicant's claim for foreign priority. In view of the fact that Applicant's claim for foreign priority has been perfected, no additional action is required from Applicant at this time.

AMENDMENTS TO THE DRAWINGS:

The attached sheets of drawings include changes to Figs. 14 and 15. These sheets, which include Figs. 14 and 15, replace the original sheets including Figs. 14 and 15. In Figs. 14 and 15, the label "Conventional Art" has been added.

Attachment: Replacement Sheets
 Annotated Sheets Showing Changes

Specification

It is respectfully submitted that the paragraph to the paragraph starting on line 25 of page 30 is being made merely to correct a translation error. It is further respectfully submitted that this paragraph, as amended, is consistent with the original specification filed in the priority Japanese patent application (JP 11-317205). Since the priority application is incorporated into the present application by reference, it is respectfully submitted that no new matter is being added by this amendment.

Drawings

The Examiner objected to Figs. 14 and 15 because they should be designated by a legend that indicates only that which is old is illustrated. Applicants are thus filing corrected drawings concurrently herewith in which the legend "CONVENTIONAL ART" has been added to Figs. 14 and 15. Accordingly, the Examiner is respectfully requested to indicate that the corrected drawings are accepted, and this objection has been withdrawn.

Acknowledgment of Information Disclosure Statement

The Examiner has acknowledged the Information Disclosure Statements filed on November 7, 2000; September 13, 2002; November 25, 2002; and June 10, 2004. An initialed copy of the PTO-1449 has been received from the Examiner. No further action is necessary at this time.

Claim Objections

Claims 11 and 15 stand rejected because of the phrase "such as the input speech." Claims 11 and 15 have been amended above to remove this phrase. Thus, withdrawal of this objection is respectfully requested.

Rejection Under 35 U.S.C. § 103

Claims 11 and 12 stand rejected under 35 USC § 103(a) as being unpatentable over admitted prior art (hereafter APA) in view of U.S. Patent No. 6,202,046 to Oshikiri et al. (hereafter Oshikiri). This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed.

As amended, independent claim 11 now recites using a perceptual weighting strength coefficient, which is determined based on a repetition period of the adaptive excitation source, to filter the signal to be coded. This amendment is supported in the

specification at, *inter alia*, page 56, line 8 - page 57, line 15; and Fig. 10. It is respectfully submitted that none of APA and Oshikiri teaches or suggests this feature.

In the Office Action, page 4, the Examiner acknowledges that the APA fails to disclose "determining a perceptual weighting strength coefficient based on a repetition period of the adaptive excitation source." The Examiner relies on Oshikiri to teach this feature. Specifically, the Examiner relies Oshikiri's perceptual weighting synthesis filter to teach this feature.

Synopsis of Oshikiri

Oshikiri discloses a method for coding speech on a frame-by-frame basis, for instance, according to a code-excited linear prediction (CELP) method. Oshikiri's method calculates a pitch period for each frame, and determines whether the pitch periods in the current frame and the previous frame are continuous. In Oshikiri, if the pitch periods are continuous, the current frame is divided into subframes and a predictive pitch period is calculated for each subframe. In order to calculate the predictive pitch period for each subframe, Oshikiri uses the determined pitch periods of the previous frame and the current frame. See col. 28, lines 33-52; and col. 34, line 44 - col. 35, line 38.

Oshikiri teaches that the predictive pitch period is used for limiting the search range of adaptive vectors in the adaptive codebook. See col. 28, lines 53-65. (Thus, if the pitch periods of the previous and current frames are not continuous, and no predictive pitch period is calculated, Oshikiri's method searches the entire set of adaptive vectors. See col. 35, lines 31-35.

In Oshikiri's adaptive vector search, each candidate adaptive vector is filtered by a perceptual weighting synthesis filter 607. An error is then calculated between the filtered signal for each adaptive vector, and an input speech filtered by a perceptual weighting filter 608. The subframe period corresponding to the candidate vector with the lowest error is chosen as the relative pitch period for the subframe. See col. 28, line 65 - col. 29, line 21.

Claimed Features Not Taught or Suggested by Oshikiri

It is apparent that the Examiner relies on the output of Oshikiri's perceptual weighting synthesis filter 607 to teach the claimed "perceptual weighting strength coefficient." See page 4 of the Office Action. However, since the output of Oshikiri's filter 607 is a filtered signal (i.e., filtered adaptive vector), Oshikiri fails to disclose "filtering a signal to be coded using

the perceptual weighting strength coefficient," as required by claim 11.

Accordingly, it is respectfully submitted that independent claim 11 is allowable at least for the reasons set forth above. Furthermore, Applicants submit that claim 12 is allowable at least by virtue of its dependency on claim 11. Thus, reconsideration and withdrawal of this rejection is respectfully requested.

New Claims

Claims 16-30 have been added. It is respectfully submitted that no new matter has been added to the present application by these claims.

It is respectfully submitted that new dependent claims 16-20 are supported in the specification, *inter alia*, in pages 56, line 1 - page 57, line 25. Furthermore, it is respectfully submitted that new claim 21 is supported in the specification, *inter alia*, at page 66, line 29 - page 67, line 4.

Furthermore, it is respectfully submitted that new claims 22-25 are supported in, *inter alia*, the originally filed claims.

Applicant further submits that new claims 26-30 are supported in the specification, *inter alia*, at page 56, line 8 - page 58, line 16.

No Prosecution History Estoppel

Applicants respectfully submit that the amendment to independent claim 15 is not narrowing. It is further submitted that this amendment was not made for a reason relating to patentability. Accordingly, it is submitted that this amendment do not give rise to estoppel and, in future analysis, claim 15 is entitled to its full range of equivalents.

Conclusion

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but to merely show the state of the art, no comment need be made with respect thereto.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider the outstanding rejections and issue a Notice of Allowance in the present application.

Should the Examiner believe that any outstanding matters remain in the present application, the Examiner is respectfully requested to contact Jason W. Rhodes (Reg. No. 47,305) at the telephone number of the undersigned to discuss the present application in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 

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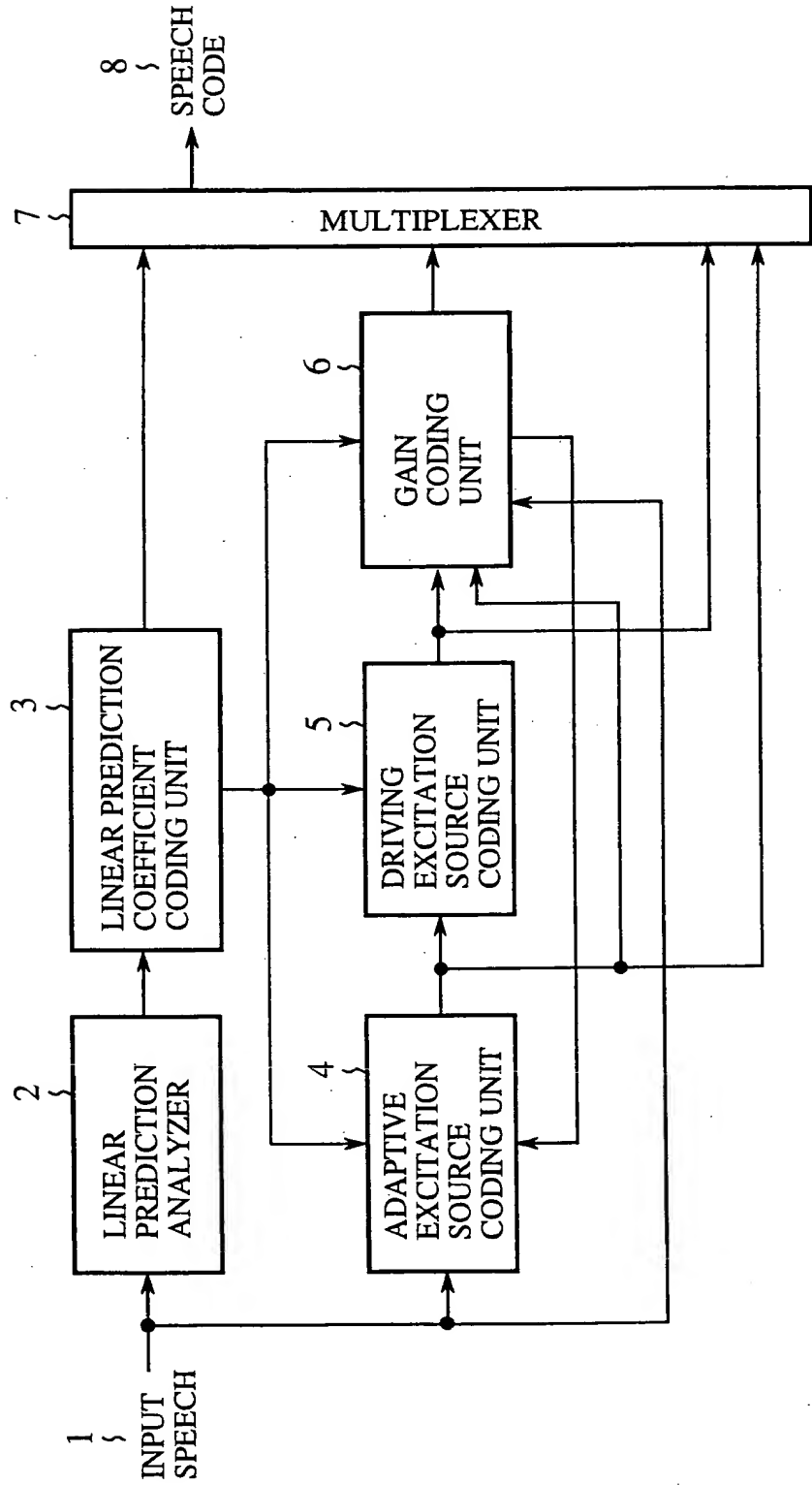

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CONVENTIONAL ART

FIG.14





CONVENTIONAL ART

FIG.15

